

Application No. 10/623,679
Response dated November 3, 2004
Reply to Office Action of August 3, 2004

REMARKS

Claims 1-28 are pending in this application, of which claims 21-23, 26 and 27 have been amended. No new claims have been added.

(1) Claims 1-8 and 14-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yasuda et al. (JP 2001-033984 in view of its English language translation)

Regarding claim 1, the paragraphs of Yasuda et al. pointed out by the Office Action are only directed to a resist material, which is different from the resist pattern thickening material of the present invention. As described at page 5, lines 18-21, the resist pattern thickening material of the present invention is applied on a resist pattern, so that it should be distinct from a resist material.

The invention disclosed by Yasuda et al. is generally directed to a method wherein an organic layer is formed on a negative resist pattern, and then the organic layer on the resist pattern is developed by an alkali developer to thereby reduce the size of the resist pattern. Thus, the effect of the material of Yasuda et al. is opposed to that of the present invention. In the present invention, the material of the claim 1 is formed on a resist material layer to thicken the resist material.

Also, an organic film of Yasuda et al. is formed on a negative resist pattern (claim 1), but the composition for the organic film does not include any crosslinking agent, which is different from the material of the present invention. This means that the invention of Yasuda et al. is not a resist pattern thickening material. Please note that "melamine" as a crosslinking agent is disclosed by Yasuda et al., but it is included in the resist material, not in the organic film. See paragraphs [0036] and [0048]. The organic film of Yasuda et al. is heated and the base diffuses from the organic film to the first negative resist pattern, solubilizing the first negative resist pattern into an exfoliation liquid, as disclosed in paragraph [0043]. Therefore, any crosslinking agent should not be included in the organic film of Yasuda et al.

Thus, the material recited in claim 1 is unobvious over the resist material of Yasuda et al.

Claims 21, 23, 26 and 27 have been amended to clarify the present invention. The same assertions as claim 1 are applied to the amended claims. In addition, because Yasuda et al. do not teach thickening the resist material, the formed resist pattern of Yasuda et al. does not have the second layer of the present invention including the crosslinkig agent, as recited in claim 21, 23, 26 or 27.

Reconsideration of the rejection is respectfully requested.

Application No. 10/623,679
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(2) Claims 9-13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yasuda et al. in view of Sato et al. (5,955,241).

The invention of Sato et al. is directed to a chemical-amplification-type negative resist composition, which is a photo radiation sensitive material. On the other hand, the present invention is not a radiation sensitive material. Since the invention of Sato et al. is irrelevant to the present invention, one skilled in the art is not motivated by Sato et al. to obtain the present invention.

In addition, the invention of Sato et al. is directed to a resist composition, and not to a resist pattern thickening material. So, even if combining Yasuda et al. with Sato et al. the invention as recited in claims 9-13 cannot be obtained. Reconsideration of the rejection is respectfully requested.

(3) In view of the above, claims 1-28, as herein amended, are in condition for allowance. Applicants request such action at an early date.

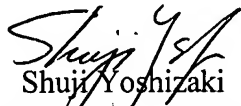
If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Application No. 10/623,679
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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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